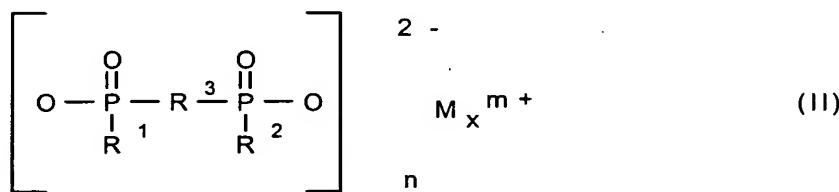
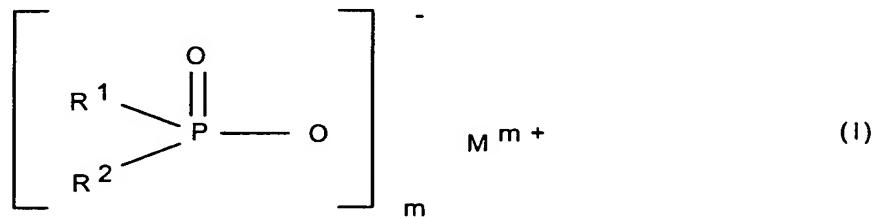


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What is claimed is:

1. A flame retardant-stabilizer combination for thermoplastic polymers, comprising, as component A, from 25 to 99.9% by weight of a phosphinic acid salt of 5 the formula (I) and/or of a diphosphinic acid salt of the formula (II) and/or polymers thereof



10 where

R^1, R^2 are the same or different and are each $\text{C}_1\text{-C}_6$ -alkyl, linear or branched, and/or aryl;

R^3 is $\text{C}_1\text{-C}_{10}$ -alkylene, linear or branched, $\text{C}_6\text{-C}_{10}$ -arylene, -alkylarylene or -arylalkylene;

15 M is $\text{Mg}, \text{Ca}, \text{Al}, \text{Sb}, \text{Sn}, \text{Ge}, \text{Ti}, \text{Zn}, \text{Fe}, \text{Zr}, \text{Ce}, \text{Bi}, \text{Sr}, \text{Mn}, \text{Li}, \text{Na}, \text{K}$ and/or a protonated nitrogen base;

m is from 1 to 4;

n is from 1 to 4;

x is from 1 to 4,

20 as component B, from 0 to 75% by weight of a nitrogen-containing synergist or of a phosphorus/nitrogen flame retardant and,

as component C, from 0.1 to 50% by weight of magnesium oxide, zinc oxide, manganese oxide, tin oxide, dihydrotalcite, hydrocalumite, magnesium hydroxide, calcium hydroxide, zinc hydroxide, tin oxide hydrate, manganese hydroxide, zinc

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borate, basic zinc silicate, zinc stannate or mixtures of these substances, the sum of the components always being 100% by weight.

2. A flame retardant-stabilizer combination as claimed in claim 1, wherein R¹, R² 5 are the same or different and are each C₁-C₆-alkyl, linear or branched, and/or phenyl.
3. A flame retardant-stabilizer combination as claimed in claim 1 or 2, wherein R¹, R² 10 are the same or different and are each methyl, ethyl, n-propyl, isopropyl, n-butyl, tert-butyl, n-pentyl and/or phenyl.
4. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 3, wherein R³ is methylene, ethylene, n-propylene, isopropylene, n-butylene, tert-butylene, n-pentylene, n-octylene or n-dodecylene; phenylene or naphthylene; 15 methylphenylene, ethylphenylene, tert-butylphenylene, methylnaphthylene, ethylnaphthylene or tert-butylnaphthylene; phenylmethylen, phenylethylene, phenylpropylene or phenylbutylene.
5. A flame retardant-stabilizer combination as claimed in one or more of claims 1 20 to 4, wherein M is a calcium, aluminum or zinc ion.
6. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 5, wherein component B comprises condensation products of melamine.
- 25 7. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 6, wherein the condensation products of melamine are melem, melam, melon and/or more highly condensed compounds thereof.
- 30 8. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 5, wherein component B comprises reaction products of melamine with polyphosphonic acid and/or reaction products of condensation products of melamine with polyphosphonic acid or mixtures thereof.

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9. A flame retardant-stabilizer combination claim 8, wherein the reaction products are dimelamine pyrophosphate, melamine polyphosphate, melem polyphosphate, melam polyphosphate, melon polyphosphate and/or mixed polysalts of this type.

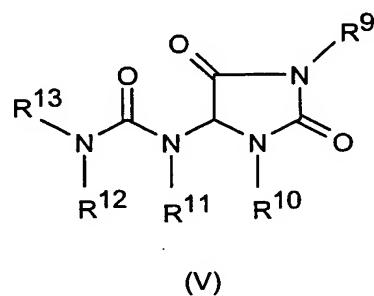
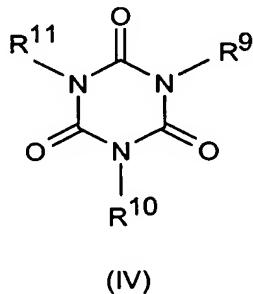
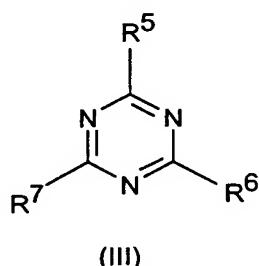
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10. A flame retardant-stabilizer combination claim 9, wherein component B is melamine polyphosphate.

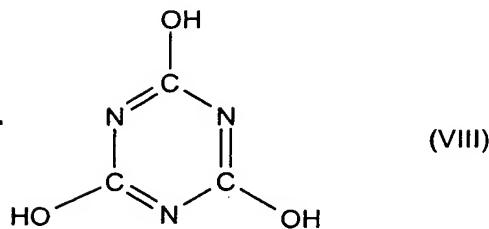
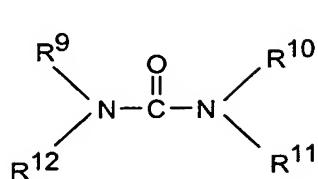
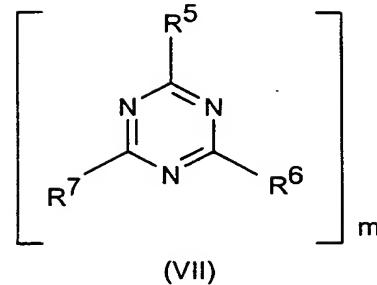
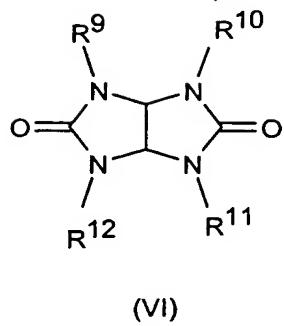
11. A flame retardant-stabilizer combination as claimed in one or more of claims 1
10 to 5, wherein the phosphorus/nitrogen flame retardants are nitrogen-containing phosphates of the formulae $(\text{NH}_4)_y \text{H}_{3-y} \text{PO}_4$ or $(\text{NH}_4 \text{PO}_3)_z$, where y is from 1 to 3 and z is from 1 to 10 000.

12. A flame retardant-stabilizer combination as claimed in claim 11, wherein the
15 phosphorus/nitrogen flame retardants are ammonium hydrogenphosphate, ammonium dihydrogenphosphate and/or ammonium polyphosphate.

13. A flame retardant-stabilizer combination as claimed in one or more of claims 1
to 5, wherein the nitrogen-containing synergists are those of the formulae (III) to
20 (VIII) or mixtures thereof.



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5 where

R⁵ to R⁷ are each hydrogen, C₁-C₈-alkyl, C₅-C₁₆-cycloalkyl or -alkylcycloalkyl, possibly substituted by a hydroxyl or a C₁-C₄-hydroxyalkyl function, C₂-C₈-alkenyl, C₁-C₈-alkoxy, -acyl, -acyloxy, C₆-C₁₂-aryl or -arylalkyl, -OR⁸ and -N(R⁸)R⁹, N-alicyclic or N-aromatic,

10 R⁸ is hydrogen, C₁-C₈-alkyl, C₅-C₁₆-cycloalkyl or -alkylcycloalkyl, possibly substituted by a hydroxyl or a C₁-C₄-hydroxyalkyl function, C₂-C₈-alkenyl, C₁-C₈-alkoxy, -acyl, -acyloxy or C₆-C₁₂-aryl or -arylalkyl,

R⁹ to R¹³ are each the same groups as R⁸ and also -O-R⁸,
m and n are each independently of 1, 2, 3 or 4,

15 X is an acid which can form adducts with triazine compounds (III); or oligomeric esters of tris(hydroxyethyl) isocyanurate with aromatic polycarboxylic acids.

14. A flame retardant-stabilizer combination as claimed in one or more of claims 1
20 to 5, wherein the nitrogen-containing synergists are benzoguanamine, tris(hydroxyethyl) isocyanurate, allantoin, glycoluril, melamine, melamine cyanurate, dicyandiamide and/or guanidine.

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15. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 14, which comprises carbodiimides.

16. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 15, wherein component C is magnesium oxide, zinc oxide, manganese oxide and/or tin oxide.

17. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 15, wherein component C is dihydrotalcite, hydrocalumite, magnesium hydroxide, calcium hydroxide, zinc hydroxide, tin oxide hydrate, manganese hydroxide, zinc borate, basic zinc silicate or zinc stannate.

18. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 17, wherein from 50 to 90% by weight of component A, from 0 to 50% by weight of component B and from 1 to 20% by weight of component C are present.

19. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 18, wherein from 50 to 80% by weight of component A, from 20 to 50% by weight of component B and from 2 to 20% by weight of component C are present.

20. A flame retardant-stabilizer combination as claimed in one or more of claims 1 to 17, wherein from 60 to 98% by weight of component A and from 2 to 40% by weight of component C are present.

25 21. A flame-retardant plastics molding composition, comprising a flame retardant-stabilizer combination as claimed in one or more of claims 1 to 20.

22. A flame-retardant plastics molding composition as claimed in claim 21, wherein the plastics used are thermoplastic polymers of the type high-impact polystyrene, polyphenylene ether, polyamides, polyesters, polycarbonates and blends or polymer blends of the type ABS (acrylonitrile-butadiene-styrene) or PC/ABS (polycarbonate/acrylonitrile-butadiene-styrene) or PPE/HIPS (polyphenylene ether/HI polystyrene) plastics.

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23. A flame-retardant plastics molding composition as claimed in claim 21 or 22, wherein the plastics are polyamides, polyesters and PPE/HIPS blends.

5 24. A flame-retardant plastics molding composition as claimed in one or more of claims 21 to 23, which comprises the flame retardant-stabilizer combination in an amount of from 2 to 50% by weight %, based on the plastics molding composition.

10 25. A flame-retardant plastics molding composition as claimed in one or more of claims 21 to 24, which comprises the flame retardant-stabilizer combination in an amount of from 10 to 30% by weight, based on the plastics molding composition.

15 26. A flame-retardant plastics molding composition as claimed in one or more of claims 21 to 24, which comprises the flame retardant-stabilizer combination having the composition as claimed in claim 20.

20 27. A polymer shaped body, film, thread or fiber comprising a flame retardant-stabilizer combination as claimed in one or more of claims 1 to 20.

25 28. A polymer shaped body, film, thread or fiber as claimed in claim 27, wherein the polymers are high-impact polystyrene, polyphenylene ethers, polyamides, polyesters, polycarbonates and blends or polymer blends of the type ABS (acrylonitrile-butadiene-styrene) or PC/ABS (polycarbonate/acrylonitrile-butadiene-styrene), polyamide, polyester and/or ABS.

29. A polymer shaped body, film, thread or fiber as claimed in claim 27 or 28, which comprises the flame retardant-stabilizer combination in an amount of from 2 to 50% by weight, based on the polymer content.

30 30. A polymer shaped body, film, thread or fiber as claimed in one or more of claims 27 to 29, which comprises the flame retardant-stabilizer combination in an amount of from 10 to 30% by weight, based on the polymer content.

31. A polymer shaped body, film, fiber or thread after after one or more of claims 27 to 29, which comprises the flame retardant-stabilizer combination having the composition as claimed in claim 15.

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